# CAHIER $\mathrm{N}^{0} 14$ <br> ROYAL EXCAVATIONS 

AT
HELWA N
(1945-1947)

BY
ZAKI YOUSSEF SAAD


## LE CAIRE

IMPRIMERIE DE LINSTITUT FRANÇAIS D'ARCHÉOLOGIE ORIENTALE

S. M. FAROUK I

UNTO HIS MAJESTY

# FARUK THE FIRST KING OF THE NILE VALLEY 

He who Revives and Protects the Ancient Civilization OF EGYPT

To whom the Science of Egyptology will be forever indebted

I bumbly present this brochure<br>Z. Y. S.

## AVANT-PROPOS.

Les deux campagnes de fouilles, de 1945-1946 et de 1946-1947, des résultats desquelles Zaki Yousef Saad Effendi a tiré la matière de ce volume, sont venues compléter fort heureusement les trouvailles exposées dans un précédent Cahier des Annales ( $\mathrm{n}^{\circ}$ 3). Leur continuation est due à la munificence inlassable de Sa Majesté le Roi FAROUK, de qui la générosité permet au Service des Antiquités de soutenir, dans cette inépuisable nécropole de Hélouan, un effort d'exploration au-dessus de ses moyens normaux.

Au fur et à mesure que les résultats s'accumulent, la dette de reconnaissance que la science contracte envers ce grand monarque s'accroît.

Le jour s'annonce déjà où Zaki Yousef Saad Effendi, qui dirige les travaux de ce site avec tant de compétence et une expérience consommée, éditera dans le détail tous les résultats obtenus. Une aide efficace vient de lui être accordée, pour la direction des fouilles, dans la personne de Mohammed Abd el-Tawab el-Hitta Effendi, afin quill puisse se consacrer plus entièrement à la préparation de cet ouvrage.

En attendant, fidèle à l'esprit de sa première publication, Zaki Yousef Saad Effendi continue, par ce volume, à livrer à ses collègues égyptologues, avec un désintéressement absolu, le meilleur fruit de ses travaux.

## ÉTIENNE DRIOTON

directedr gévéral du service des antieutiés.

## INTRODUCTION.

The subject of this publication is a study and description of some tombs and objects found during my fourth and fifth season's work in the Royal Excavation at Helwan. It was my intention to publish in full the progress of the work, season by season, but being single-handed, this has not been possible. I therefore publish this to enable the Egyptologists to know something of the worl that I have done at Helwan.

I regret that the late Professor J. Capart; who was the Director of Queen Elizabeth foundation for Egyptology in Belgium, died before the publication of this brochure. During his last visit to Egypt, he was so kind as to come to see the excavations and spent the whole afternoon examining the objects and visiling the tombs. He considered the work at the Royal excavalions at Helwan of primary imporlance. Shortly before he died he said ${ }^{(1)}$ : «Depuis longlemps aucune fouille n'avait présenté autant d'intérêt ni apporté de si riches résultats archéologiques. C’est uniquement à la générosité de S. M. le Roi FAROUK que l'Égypte et l'Égyptologie sont redevables de cet important projel."

It is no easy matter to direct excavations on a large scale, single-handed, particularly those of the size of the Royal Excavations at Helwan. The field-work alone, if properly attended to, will take up all of one's time. In addition, there are many other things requiring attention.

All the objects found in the tombs must be thoroughly examined, restored, numbered, recorded, photographed and finally be made the subject of delailed study. At the end of the day, when the digging has closed, another
${ }^{\text {(1) }}$ Ahmed Safoit Bey, L'Amour de l'Art, no ${ }^{\circ}$ III, séries 34,35 et $36,28^{\circ}$ année, Le Roi Farouk el l'Égyptologie, p. 170 et 171 .
digoing commences. This is a work of search in many scientific publications dealing with Egyptology.

A single-handed director, however worn out he may feel at the end of the day, must yet find time to make comparative study which is essential for his work.

I desire to thank M. É. Drioton the Director General of the Department of Antiquities for his many visits to the site during which I greatly appreciated his advice and encouragement. I am also very greatful to him for finding an assistant for me. I know he has been trying to do this for the past seven years.

Mohammed Effendi Abd el-Tawab el-Hitta has now been delegated to assist me in the excavations.

To this I would add my thanks to H. E. Dr. G. Sobhy Bey and Miss Bitter for correcting the manuscripl and for many valuable scientific advices, $H$. $E$. Dr. M. Kamel Hussein Bey very liindly studied the diseases and strange fealures of some bones, Fawzi Ibrahim Effendi for the plans and survey work, Mahmoud Shadouf, the photographer of the Department of Antiquities at Saqqarah and his assistants for the excellent photographs which appear here. My thanks are also due to my workmen and their chief Rais. The skill with which they achieved the work and their unceasing care has resulted in the perfect restoration of many of the objects found in the tombs.

Zaki Y. Satd.

Ezbit el-Walda, Helwan, 3-5-1 95o.

SITE PLAN
OF THE
ROYAL EXCAVATIONS AT HELWANN


## SOME OF THE TOMBS EXPLORED

AND

# ObJEGTS FOUND DURING THE FOURTH SEASON 

(1945-1946)

## IN

## THE ROYAL EXCAVATION AT HELWAN

BY ZAKI SAAD.

The fourth season opened on 15 th October 1945 and ended on 31 st May 1946. During this period we discovered 706 tombs, of which 180 were found to be intact. In addition we uncovered in two areas, east of the necropolis one very large tomb and the remains of what looked like a monastery.
There were special reasons for selecting the latter two places. For a long time it had been rumoured locally that the two large heaps of gravel, broken sherds and lime-stone, marking these two sites, concealed vast treasures. For many generations local inhabitants firmly accepted these rumours and they expected much gold to be discovered.
The monastery site was associated in the minds of the people with King Shahran, and was known locally as "The Convent of King Shahran"; many attempts had been made to uncover this so called treasure but they were unsuccessfull. As time went on it was believed that a curse was associated with the place, and I was warned many times that I would suffer the same fate as others if I attempted to exploit the area.

[^0]I assured them that I was not a treasure hunter. I told them I worked not for gold but for the sake of science. With these assurances we commenced to clear the sites, beginning with the smaller one.

Our first task was to clear from the surface the vast amount of sand that had accumulated during the centuries covering everything. This done, it was possible to trace the outlines of the outer rectangular walls. They measured 41 metres east by west and 30 metres north by south. It was impossible to ascertain the height of these walls as time had levelled them almost to ground level. They were thick, and the mud bricks used in their construction measured o m .27 by o m. 14 by om . o 6 .

The entrance to this building on the west side was found to be in the form of a gateway measuring 5 m .50 in width. This gateway was bounded by two walls on its north and south. These walls were 2 m . 3 o thick. It was clear from the size of the entrance and its structure that the place had been inhabited at one time ( pl . I).

Running throughout the entire lengths of the north and south sides of the building were two rows of small chambers the doors of which opened into a rectangular court, situated in the middle. A number of similar chambers were found on the east side also, and these opened in a similar manner into the central court.

In access with the gate we found a circular pit dug in the ground and taking up a large portion of the central court. This pit was originally walled up all round with a mud wall. Few traces of it remained (plan 1).

Some of the chambers contained remains of pottery jars still sunk deep in the ground, as the custom was, and scattered about, all over the area were fragments of pottery vessels and pottery lamps. Most of these were relics of the Byzantine and Coptic periods.

I was now confronted with a problem. What exactly was this, that we were discovering. The fact that the site was so close to the ancient archaic period necropolis made the problem more difficult. Was this a religious house of a later period or was it an ancient burial place?

I have not succeeded in solving the riddle. It is certain from the bricks used that the edifice could not be dated back to the Archaic period. There were other confirmations that it was of much later date due to the items
we found. It may be the building referred to by the historians Abu-Sateh and Shabeshty as "The convent of King Shahran"" ${ }^{(1)}$, the name given to it by the local people ${ }^{(2)}$.

We next commenced on the larger of the two dumps. This was slightly to the west of the first one. We uncovered here a huge mastaba built with white lime-stone. Little is left of the enormous superstructure. The mastaba measures 56 metres from north to south and 27 m . 40 from east to west. The east wall was originally encased with well dressed white lime-stone. This wall was not built per-


Fig. 1. pendicularly but was inclined inwards, to make the top of the tomb narrower than the base (fig. 1). The remaining three sides were built straight upwards and were protected by a mud brick wall. The part of this, protecting the north wall, was found in fairly good condition and much better than the other parts. This mud wall was in turn protected on the outside by larger boulders or rax stones. I can think of no reason for all this care. It may have been so constructed originally, or added to in later times (plan 2).

In the centre of this superstructure we found a rectangular shaft, walled in a curious manner. The north, east and west walls are built of small white lime-stone blocks, undressed and made to imitate mud bricks, headers and stretchers (fig. 2 and pI. II $a, b$ ).

The south wall is built with large horizontal blocks of white lime-stone, which are comparatively well dressed. These blocks measure 4 m . 50

[^1]by 1 m .10 by om .3 o , and it was built in such a way as to be a strong protection for the burial chamber. This we found on the south side of the shaft with an entrance in the middle of this south wall (fig. 3) (pl. II $a, b$ ). To prevent the large monolithes from falling they were put horizontally, from east to west, while small slabs of

2. s.

Fig. 2. - Stone slabs in imitation of mud brick buildings, beaders and stretchers. lime-stone were put side by side between the slabs from north to south (pI. II $a, b$ ). This method prevented them from tumbling down, as well might have happened if they were simply placed one on another. This method is quite unique and has not been encountered before.

On entering the burial chamber, through the door at the bottom of the shaft, we met with two doors, one in the east wall and another in the west wall. Both doors led to magazines with roofs composed of stone blocks made in imitation of the trunks of palm trees (p1. III $a$ ).

We found the burial chamber to be rectangular in form, divided in the middle by two jambs with a flat lintel above. Behind this lintel was another one lower than the first, and rounded. It resembles the drum usually found in false doors under the lower lintel. This rounded lintel probably represented a curtain which could be rolled up and down (pl. III $b$ ).
The walls and roof of the burial chamber were in a good state of preservation. The stone slabs of the floor were broken in places. This was due to soundings made by robbers in search of any treasure which might be concealed under the floor.
In the west wall of the west magazine we found the plunderer's passage. They had used this one, after three unsuccessful attempts to penetrate the tomb through the south wall. Evidence of these unsuccessful attempts can be seen in stones removed from the south wall.

In the west magazine we found a pottery lamp, most probably left by the robbers and a pottery flask for water. Both the lamp and the flask were Graeco-Roman period, thus giving some idea as to when the robbers got in.

In the tomb we found a large slab of lime-stone with round holes bored in it, probably with flint instruments of crescent shape (pl.IV $a$ ). Pieces similar to this were found in the Step Pyramid of Saqqara ${ }^{(1)}$. We also found some mallets made of hard stone and differing in size $(\mathrm{pl} \text {. IV } b, \mathrm{~V} a)^{(2)}$. Fragments of stone vessels and pottery jars found are all of the archaic period.

Judging from the tomb, its burial chamber, magazines, shaft and superstructure it is certain that it is a tomb of the archaic period. I would say it is of the late second or early dynasty. It is certainly one of the largest of this period. Larger tombs have been found at Abydos and Saqqara but these were built mud bricks. This is the largest tomb found up-to-date, built with stone and dating

Z. S.

Fig. 3. - The big stone blocks and the small ones between, with the doorway. back to the archaic period (plan 2).

In view of its size it must have been made for a king or a noble of a very exalted rank. The only inscription found was one group of inscriptions (fig. 4) which might be either the name of the owner of the tomb or the name of one of the workmen. It was found on a stone in the upper part of the shaft.

Having finished work on these two sites, we continued the work on the Necropolis where we left off at the end of the third season.
The first tomb we came across was moderate in size. It had originally a mud brick superstructure of which few traces remained (pl. V b). In
${ }^{(1)}$ See Firth and Quibele, The step Pyramid, Pyramide à Degrés, L'Architecture, t. II, pl. XCV t. II, pl. $9^{3,}, 1$ and 2 . and XCVI, 2.
${ }^{(2)}$ See J.-P. Later, Fouilles à Saqqara, La
the north west corner of this superstructure we found a small chapel facing west (plan 3). The burial chamber is a rectangular open pit, cut in gravel and measuring from north to south $4 \mathrm{~m} .30,2 \mathrm{~m} .60$ from east to west and 3 m .40 deep. There were two ledges on the east and west sides on which there were still traces of the wooden beams used to support the roof. The descent to the chamber is on the west side in the form of steps, the upper



Fig 4.
ones being of mud bricks while the lower ones were simply cut in the gravel. The tomb had been thouroughly plundered, but the few remaining fragments of pottery and broken vases made of alabaster and slate indicated it to be of the Ist dynasty.

The next tomb no 25 H . 4 was of an unfamiliar type and had also been plundered. The descent to this tomb is from south to north in the form of steps cut in the gravel and it was open without roof. It ends on both sides with two grooves in which the portcullis was lowered after the body of the owner was buried. At the bottom of the steps there are two magazines on each side. The first one in the west wall measures 1 m . /to from north to south, 1 m .25 from east to west and is 1 metre high. The second one in the west wall measures 1 m . 40 from north to south, 1 m . 3 o from east to west and again is 1 metre high. The first magazine in the east wall measures o m. 65 square and is o m. 85 high. The second one, lying to the north of the first one, measures 1 m .35 from north to south, 1 m .25 from east to west and is 1 m .10 high.

Behind the place for the portcullis is the door leading to the burial chambers. The doorway is 0 m .68 wide, 1 m .65 high and its two sides are 1 m .20 thick. Through this door one enters into a corridor running from east to west.

On the west side of the north wall of this corridor is a door which leads to a little square chamber in the east wall of which is another door. This door communicates with a rectangular chamber measuring 2 m . 30 from north to south, 1 m .40 from east to west and 2 m .25 high . At the north end of this chamber, and on a higher level than the floor, we found the burial place which measures 1 m .3 o from east to west, o m . 8 o from north to south and o m. $9^{5}$ high. These measures correspond with the measures of most of the burial places of the Ist and IInd Dynasties. All the walls of the chambers from the door inwards are hewn in the gravel under ground. The wall of the descent as well as the walls of the chambers and roof were all originally plastered with yellowish mud (Tafl) and then white washed (plan 4).

Contexts : In the burial place were found few bones in very bad state of preservation.
Few fragments of alabaster and slate were found in the room in the north part of which was the burial place on a higher level.

In the north west magazine were found ten pottery jars type 11 .
On the steps were found three stands for vessels made of clay type BB3.
Tomb $\mathrm{n}^{\circ} 68$ was found thoroughly plundered. It is rectangular in form, cut in gravel on the four sides; then were walled up with mud bricks. It is composed of one place for the body of the owner and his funerary objects to be placed round him, instead of storing them in a separate magazine. The burial place measures 2 m . 50 from north to south, 1 m .20 from east to west and 1 m .60 deep. At the top of the east and west walls at this height, the beams on which the roof were put left their traces in form of brown powder, in holes where those wooden beams were inserted. The tops of these walls were forming two ledges to act as roof supports. The width of these ledges on both sides is 0 m .40 . The sides of the tomb from the ledges upwards were then built up all round to the ground level. The height altogether is 3 m .60 . The space from the roof until the ground level was filled with gravel after the body buried. If there were a superstructure above the ground, it is hard to tell as nothing was left for us to judge by (plan 5).
Tomb $n^{\circ}{ }_{185}$ was found plundered. It is rectangular in form, cut in gravel and has three magazines on the south which are built with mud bricks.

Ledges for the roof on east and west in gravel. The burial place measures 3 m . 40 from north to south, 2 m . 50 from east to west and 2 m .20 from the bottom of the burial place to the top of the ledges. The two ledges are o m. $7^{\circ}$ each in width. From the ledges to the ground level is 1 m .90 . The three magazines are : one to east measures 1 m .35 from north to south, o m. 55 from east to west and $2 \mathrm{~m} .20+1 \mathrm{~m} .90$ deep; a second in the middle measures 1 m . 40 from north to south, 0 m . 50 from east to west and 2 m .20 +1 m .90 deep; the third magazine to west measures 1 m . 3 o from north to south, $o \mathrm{~m} .60$ from east to west and $2 \mathrm{~m} .20+1 \mathrm{~m} .90$ deep.

Contents : (in the burial place) 1. One dolomite votive vase entirely intact.
2. One flint implement.

3-4. Two alabaster tubular vases (rims broken).
5-22. Eighteen pottery jars type 11 .
Usually we found tombs of this type either with the magazines all built or the burial place only built. In this case we found the burial place unbuilt and the magazines are only built, which is not likely as in most cases. It is not easy to get the sound reason for such an exceptional case which shows a greater respect for the belongings of the owner of the tomb than for his own body (plan 6).

Tomb $\mathrm{n}^{\circ} 355$ was found plundered. Its descent is on the north. At the beginning of the descent was found a burial place in the rubble with which the descent was filled. The body in it was found lying contracted on the left side, head to north and looking to east. The bones were in a very bad condition. In front of the face was placed a tubular alabaster vase. Was the body buried in this place for a servant of the owner of this tomb or for a person buried later who had no connection with the tomb? It is not easy to give an answer to such a question unless we have the evidence. The descent is cut in gravel and one can hardly notice the steps which were cut in gravel but their forms are lost due to the fragility of the material and time. The length of the descent is 3 m .60 and its width is $o \mathrm{~m} .6 \mathrm{o}$. At the end of the descent are two grooves for the portcullis. The width of the door is 1 m .20 and the grooves are 0 m .20 width each.

To the west of the door is a magazine built with mud bricks. It measures 0 m .55 from north to south, om .70 from east to west and $\mathrm{om} .8 \mathrm{o}+\mathrm{om} .7^{\circ}$ +0 m . 50 deep. The burial place is to the south and measures 2 m . 50 from north to south, 1 m .90 from east to west and 1 m .70 high from the floor of the burial place to the top of the ledges for the roof. The ledges are on the east and west. The width of each ledge is o m .3 o . Above them another wall is built on each side for a height of o m. 70 and each form a second ledge o m. 3 o wide. Above each ledge a third wall is built up to the ground level measuring 0 m .50 high. The first two ledges were to receive the roof timber beams for a roof were found. In this case there must have been a second store in which was put the rubble filling to the ground level. The depth of the tomb from the surface of the ground to the floor of the burial place is 2 m .90 .
The position of the magazine in this tomb is a feature which is quite new to us. We never before found a tomb with a magazine on one side of the door. Magazines are always either on both north and south of the tomb or on one of these sides; but not in such a position as the above mentioned (plan 7).

Tomb $\mathrm{n}^{\circ} 385$ is one of the most interesting tombs discovered in the site. It was found plundered but one of its magazines was found intact. A descent from north cut in gravel leads down to a flight of mud brick steps running down to the north wall of the burial chamber but without any door to communicate with the inside of the burial chamber ( pl . VI $a$ ). On each side of the steps are two magazines. The burial chamber is cut in gravel in a rectangular shape and then walled up with stone slabs on the four sides. The north and south walls are composed of one white lime-stone block each. Each block measures 4 metres long, 2 metres high and about om . 40 thick. The east and west walls are composed of similar blocks with the addition of another block on each side to the south measuring 1 m .17 wide, $2 \mathrm{~m} .{ }^{1} 7$ high and about 0 m . 40 thick ( pl . VI $b$ ). These two blocks were added on these sides to make the burial chamber rectangular in form. Thus the burial chamber measures 5 m .22 from north to south, 4 metres from east to west and $1 \mathrm{~m} .85+2 \mathrm{~m} .30$ from the floor of the burial chamber to the ground
level. The ledges on the two sides are one east which is 1 m . 30 wide, the other on the west and is 0 m .60 wide, and on them were most probably put stone slabs as a roof for the burial place. As there is no door to the burial chamber, the roofing slabs must have been put after the body of the owner was buried. The magazines were roofed, probably with timber beams and then all the place was filled with rubble to the ground level. No traces of a superstructure were left by which one can judge if there was a superstructure or not (plan 8).

The magazine on the north-east measures 1 m .10 from north to south, 1 m .10 from east to west and $2 \mathrm{~m} .9^{5}+2 \mathrm{~m} .3 \mathrm{o}$ high. In it were found some of the broken pottery jars and dishes of the common type of the Ist Dynasty. The magazine south of it measures 1 m .25 from north to south, 1 m .05 from east to west and the height is the same like that of the previous. In it nothing was left.

The magazine on the north-west was found intact. It measures 1 m .10 from north to south, 0 m .90 from east to west and $1 \mathrm{~m} .20+2 \mathrm{~m} .30$ high. In it we found ribs and different bones which belong to more than one ox, put in layers. Below the first layer of ribs and bones we found a nicely shaped flint knife 0 m .35 long (pl. VII $a$ and $b$ ). By the knife were found some pottery dishes and two alabaster tubular jars one slightly broken and measures 0 m .23 high, o m. 13 width of base, 0 m .105 width of mouth and $0 \mathrm{~m} . \mathrm{o} 3$ width of the rim. This jar is well polished on the outer side as well as on the inner side. The other jar is of poorer alabaster and the workmanship is inferior in comparison with the first. It measures 0 m .125 high, 0 m .10 width of base, 0 m .09 width of mouth and about 0 m .015 width of rim.

Due to a sand storm we were obliged to leave the clearance of the magazine for some days. We photographed the flint knife (pl. VII $b$ ), and do not expect any of its kind to be found. When we cleared the rest of the magazine, we found at the bottom, below layers of ribs and other bones, two big flint knives put one across the other in form of a pair of scissors (pl. VII $c$ ). Both of the knives are intact and one is 0 m .445 and the other is 0 m .415 long. The work of both knives is excellent like the knife we found above. The form of the three knives is elegant. The two knives found below are considered
the biggest of the kind discovered until now ${ }^{(1)}$ in tombs of this period (pl. VIII).
The magazine on the south-west was found thoroughly plundered and measures 1 m . 30 from north to south. 0 m .90 from east to west and 1 m .20 +2 m .3 o high.

The burial chamber was plundered through a tunnel by the east side vertical from the ground level down to the part below the ceiling of the tomb. At this part the plunderers had broken through the gravel ledges and the top of the stone block which walled the east side (pl. VI $b$ ). Most of the tombs are plundered in this way, a feature which shows us that the roofs on these tombs were very solid at the time of plundering them. More than that, the place of the holes used by the plunderers in 99 per cent of the robbed tombs indicates firmly that the robbers knew very well the position of the places they were looking for. This is another proof that the plundering of these tombs took place immediately after the burial of the owner of the tomb.
The interest of this tomb is in the huge blocks walling up the burial chamber. In the previous seasons we came across tombs built with blocks of lime-stone which were considered then very surprising for their size ${ }^{[2]}$, but here we have huge blocks double the size of the blocks used in previous tombs. Using such blocks shows us the skill of the people in the cutting, dressing and, added to that, carrying them from the quarries in the bills to the place of the tomb which is a tong distance. Unless those people were using easy roads for the transport of such blocks, they must have used methods and means beyond our comprehension to fulfil the task, which is considered a very difficult one.

Tomb $\mathrm{n}^{\circ} 407$ was found plundered. Its descent is from west, cut in gravel in the form of steps 7 m . 5 o long. At the end of the descent the door leading to the inside of the tomb was found blocked with bricks and plastered with mud ( pl IX $a$ ). The door opens with a passage from east to west. It measures 3 m . 40 long, 1 metre wide and the height of the walls

[^2]round it, is 2 metres. At the end of this passage there are two doors one in the north wall which leads to a magazine and the other in the south wall leading to the burial chamber. A third door is in the east wall of the passage leading to a second magazine.
The magazine in the north measures o m. 60 from north to south, 1 m .80 from east to west and the height of the walls is 2 metres. The magazine on the east side measures 2 metres from north to south, 1 m . 05 from east to west and 2 metres height.
The burial chamber measures 8 m . 10 from north to south, 3 m .85 from east to west and 2 metres high. The walls of the burial chamber were built with mud bricks and then walled up with timber planks. The floor was paved with timber. The one roof of the burial chamber and the two magazines with the passage was all of wood. Traces of the beams for the roof and the timber planks on them were found on the ledges. Above the ledges were built to the ground level and the whole area was filled with rubble (plan 9).
Contents : In the burial chamber were found fragments of different stones of incomplete vases, and some ivory pieces. In the north magazine we found seven pottery jars type 11.

In the magazine to the east, we found nine pottery jars, type 11, six pottery jars type 4 , one type 1 , one type ${ }_{2} 7$, four tubular pottery jars type 64 , one pottery plate type $/ \mathbf{4} 1$, and two pottery plates type 46 .

Tomb n ${ }^{\circ} 426$ was found plundered. The descent is from south to north, in the form of steps cut in gravel, 6 m . 50 long. At the end of the descent there is a passage 1 m .80 long and 1 m . 05 wide on both sides of which are two doors communicating with the magazines; one in the east measures 1 m . 3 o from north to south, o m. 52 from east to west and $2 \mathrm{~m} .10+2 \mathrm{~m} .5 \mathrm{o}$ high; the other magazine in the west measures 2 m . 05 from north to south, o m. 45 from east to west and $2 \mathrm{~m} .10+\dot{2} \mathrm{~m}$. 50 high.

By the end of the passage, to the north of the two doors of the two magazines there are two grooves in which the portcullis of white lime-stone is still in its place as it was lowered down to block the burial chamber after the owner of the tomb was buried. On the upper part of the portcullis the two holes are visible. These two holes are, as matter of fact, on a higher level than
the surface of the roof of the burial chamber, a fact which refuses the idea that the function of the holes on the upper part of all the portcullis was to help, in either seeing the inside of the burial chamber or to help in passing the perfume of burnt incense through, to be inhaled by the soul of the owner on the tomb. The position of the two holes here affirms that their function was to help in the lowering down of the portcullis in its place (plan 10).

The burial chamber is built with mud bricks and measures 3 m . 50 from north to south, 2 m .35 from east to west and 2 m .10 high . At this height there are four ledges for the roof which was of timber beams and planks. The width of the ledges is 0 m .40 . Above the ledges were built walls on the four sides and then the whole area above the roof was filled with rubble. In the burial chamber we found nothing but few fragments of alabaster and slate four vases ${ }^{(1)}$.

Tomb $n^{\circ}{ }_{1} 16$ was found intact. It was cut in gravel in a rectangular form, the burial place was built with mud bricks on the four sides, measuring 1 m .6 o from north to south, 1 m . 40 from east to west and $1 \mathrm{~m} .10+1 \mathrm{~m} .6 \mathrm{o}$ high. The north part was used as a magazine but left without building. It measures 1 metre from north to south, 1 m .6 o from east to west and 2 m .70 high . The south part was left as a magazine but nothing was put in it. The body was found lying contracted on the left side, head to south, looking to west. The bones were in a bad condition of a female adult. Judging by the teeth, the owner may have had about forty years of age (pl. IX b).

Contents : In burial near by the pelvis : 1. One alabaster tubular jar. intact, measuring o m .35 high , width of base 0 m .185 , width of mouth 0 m .025 , width of rim and the whole width of mouth with rim is o m. 21; 0 m .04 below the mouth is a representation of a cord; o m . 065 below the cord there is a group of four vertical strokes in black ink ||| which might be interpreted sign for number " 4 " and may denote the capacity of the jar. The alabaster, of which this piece is made, is of the best quality, transparent and with circular veins. The work is excellent (pl. X A).
2. To the north of the alabaster jar was found a very interesting piece

[^3]of ivory. It is a representation of a column in forn of a bundle of eight lotus flowers with their stalks, one in the centre and seven surrounding it. The stalks are tied together by three cords immediately below the flowers. This piece testifies to the fine work of the Ist Dynasty and may show the origin of the columns used in temples in the later dynasties (pl. XI a) ${ }^{(1)}$. In the north-west corner : 3. One intact tubular jar o m. 22 high, o m. 105


Fig. 5. - Engraving on the pottery jar. width of base and $o \mathrm{~m} .12$ width of mouth with rim. Although there are some natural faults in the stone, yet the work is excellent and the veins of the alabaster are beautiful (pI. X B).
4. One alabaster vase with a rim slightly broken. It measures o m. $1 / 45$ high, o m. o6 width of base, o m. 09 width of the middle and 0 m .7 width of mouth with the rim. The alabaster of which this vase is made is of bad quality and the work is poor (pl. X H).
5. One pottery jar with a handle, the rim is broken. This pottery jar is of the kind known as 'Egean'. It is about 0 m .26 in height and on the shoulder is engraved a group of two signs (pl. XI $b, \mathrm{~B}$ and fig. 5).

In the south-east corner : 6. Fragments of a complete alabaster tubular jar which we have been able to restore ( pl . X C). It is about o m. 26 high, o m. 11 width of base and 0 m .15 width of mouth and rim. The alabaster is good and the work is poor.
7. Fragments of another tubular alabaster jar which was restored. It measures 0 m .25 in height, 0 m .15 width of base and 0 m .21 width of mouth and rim. The alabaster of which this jar was made is of good quality and the work is excellent ( pl . X D).

In the south-east corner were found fragments of alabaster and slate for the following dishes and bowls which were restored.
(1) Zaxi Sud, Chronique d'E'gypte, no 41, January 19/6, p. 197, fig. o.
8. One alabaster bowl o m. 137 high, o m. o 8 width of base and o m. 23 diameter. The alabaster is of the best quality. The work is excellent (pl. X E).
9. One alabaster dish o m. 065 high, o m. 07 width of base and om .21 diameter. The alabaster is not bad and the work is excellent ( pl . X F).
10. One alabaster dish o m . o 5 width of base, o m. 075 high and o m. 165 diameter. The alabaster is good and the work excellent (pl. X F).
11. One slate bowl 0 m .115 high, om .10 width of base and om .28 diameter. The slate is grey with some dull white veins. The work is excellent ( pl . XI $b \mathrm{~A}$ ).
12. One slate dish 0 m .077 high, 0 m .075 width of base and $0 \mathrm{~m} .2_{4}$ diameter. The slate is dark grey and the work is excellent (pl. XI $b$ C).
13. One slate dish o m. o 43 high, no base and o m. 21 diameter. The slate is grey with some dull white veins. The work is excellent (pl. XI b D).

In the north magazine : $14-18$, five pottery jars type $3 ; 19-31$, thirteen pottery jars type 11 (pl. IX $b$ ).

The piece $n^{\circ} 2$ is certainly very interesting as a study. Since the tomb dates back to the Ist Dynasty, the piece must be of the same date. This gives a sure opinion as the origin of the lotus form capitals of the columns used afterwards in the temples. The piece is about o m. 21 high and at its lower end is a square part about 0 m . 015 long and this part must have been thus formed in order to be fitted in to some other object which may have been decayed in the tomb and no trace of it was left or was not put in the tomb for some reason. As to the nature of the other object, it is very hard to guess, as no traces of it were left.

Tomb n ${ }^{\circ} 505$ was found plundered. The descent starts from east to west in form of steps accurately built with mud bricks. These steps are four in number. The steps here turn towards north and are built in the same manner like the others. The steps on this part are 11 in number. The steps end in a space 1 m .35 from north to south and 1 metre from east to west. To the north of this space are the two grooves in which the portcullis was lowered down and found in its place ( pl . XI $\boldsymbol{c}$ ). Behind the portcullis was found a doorway 0 m .80 wide and 1 m .85 high loading into a chamber on each
side of which four magazines two in the east and two in the west. The chamber measures 2 m . 30 from north to south, 1 m .55 from east to west and 2 m .50 high. The first east magazine measures 1 m .40 west, 0 m .50 north-south and 1 metre high. The second east magazine measures 1 metre east-west, 0 m .50 north-south and 1 m .10 high. The first west magazine measures 1 m .20 east-west, 0 m .70 north-south and 1 metre high. The second west magazine measures 1 m .20 east-west, 0 m .80 north-south and 1 metre high.

In the north wall of this chamber there is a doorway o m. 75 wide and 1 m .80 high. This door communicates with a second chamber 5 m .3 o from north to south, 2 m . 30 from east to west and 2 m .50 high. On the east side there are three magazines nearly of the same size which is 1 m .30 from east to west, 0 m .60 from north to south and 1 metre high. On the west of the chamber there is a rectangular recess 0 m .50 from east to west and the length from north to south is 1 m .65 while the height is the same as that of the chamber. Above this recess from the west there is a vertical opening from ground level to the ceiling in which was found a rectangular slab similar to those usually found on both sides of the stelae we came across in the ceiling of previous tombs of the IInd Dynasty ${ }^{(1)}$. Most probably this opening used to hold a stela of the same nature, but unfortunately was not found.

On the east side of the north wall of this chamber there is a third door o m .75 wide and 1 m .80 high leading to a third chamber 2 m .60 from north to south, 2 m . 40 from east to west and 2 m . 50 high. Its floor is 0 m .60 deeper than the floor of the rest of the other chambers. On the east side there are two magazines equal in size measuring 2 metres from east to west, 0 m .60 from north to south and 1 m .10 high . At the east end of both of them there are two doors, one in the north wall of the first magazine and the other is in the south wall of the second magazine. In between the two doors is a rectangular magazine 0 m .80 from north to south, o m. $7^{\circ}$ from east to west and 1 m .10 high.

All the walls of the chambers and the roof were mud plastered and white
${ }^{(1)}$ Zati Siad, The Royal Excarations at Saqqara and Helwan, 1941-1945, p. 163, 171, ${ }^{172}$ and ${ }_{17} 3, \mathrm{pI}$ LXXXII, $a$.
washed with lime. The plan of this tomb is unique and the number of the magazines is a new feature to us (plan 11).

In the debris left by the plunderers we found the following objects :

1. Clay pottery jar stoppers with impressions of cylinder seals bearing the name of King 'Neter En' ${ }^{(1)}$ who ruled in the IInd Dynasty on one side and on the other there is a name of the official who was the owner of this tomb, but unfortunately his name is illegible (pl. XII $a, b$; XIII $a$ ).
2. Four rectangular lime-stone pieces ( pl . XIII $b$ ).
3. Forty-six flint scrapers (pl. XIV a) (only ten are photographed).
4. Twenty-four small flint implements (pI. XIV a) (only thirteen are photographed).
5. One flint knife o m. 13 long (pl. XIV a).
6. One pottery jar type 11 .
7. Three rough pottery jars type A2.
8. Two pottery plates type 41.
9. Ten alabaster tubular jars of different kinds all intact except one which was found broken.
10. Fragments of alabaster, slate and dolomite.

In the mastaba (Superstructure) of the Old kingdom there are chambers differing in their numbers from two to ten or more. In the IInd Dynasty we have found this tomb and others with underground chambers. The owners of the tombs in the later periods might have changed the underground chamber idea to those in the superstructure, leaving the substructure for the burial chamber only. This, to my mind is how the evolution of the superstructure developed from one chamber to many ones underground, to the big number in the superstructure above ground from the IVth Dynasty to the later periods.

Tomb $\mathrm{n}^{\circ} 636$, was found plundered. It is rectangular cut in gravel measuring 1 m . 3 o from north to south, o m .8 o from east to west and 1 metre high. In it were found scattered bones of a child. The body was buried in a box

[^4]most probably of wood with the sides and bottom inlaid with shells, ivory and a black material (pI. XIV b). By the side of the box was found an alabaster vase which is seen clearly in the photograph. We then removed the bones and the vase to treat the box with paraffin wax in order to take it out of the tomb as one piece ( $\mathrm{pl} . \mathrm{XV}$ a). It was sent to the laboratory of the Museum to be restored ${ }^{(1)}$.

Tomb $\mathrm{n}^{\circ} 653$ was found plundered. Judging by the area which was occupied by this tomb it may be considered the biggest. one ever found of the Ist Dynasty period. The area measures 48 metres from north to south and 24 metres from east to west . The descent is on the north side cut in gravel in form of rough steps ${ }^{1} 7 \mathrm{~m}$. 50 long and its width differs from $1 \mathrm{~m} .7^{\circ}$ at the upper part to 1 m .20 at the lower part.

The descent leads down to a burial place 25 m . 3 o from north to south and about 7 metres from east to west. There is a part on the north which is one higher than the other part to its south measuring 6 m .6 o from north to south and 6 m . 20 from east to west. This high part is narrower than the part to the south. The lower part was walled up on the east and west sides with Nile-mud and pieces of stones. Because of some lime-stone slabs found in the burial place one might suggest that it was encased with white lime-stone slabs which have been carried away after the tomb was plundered for building purposes, in later periods (plan 12).

By the sides on east-west, and south were found holes dug regularly. There are 17 holes on the east side, 17 holes on the west, and 8 holes on the south. In front of every two holes on the east side there is a hole forming a triangle with the two others. The position of the holes is irregular. When we emptied all the holes there were nothing found in any of them to give us an idea about their function ( pI . XV $b$ and XVI $a$ ).

Were these holes meant to hold wooden posts for some religious purpose? If so, we ought to have found traces of the wood in some of them. We found however in a hole in the west-south corner on ground level, traces of wood.

Were these holes meant for keeping pottery jars in them? If so we ought
${ }^{(1)}$ The box is in the care of Zaki Eff. Iskander who is doing his best, with his assistants, in the laboratory of the Museum to restore it.
to have found some of them with their contents, because these pottery jars were never stolen by plunderers of any period. In a hole to the east of the descent and middle-way between the descent and the north-east corner on the same level with the ledge we found three pottery jars type C I (pl. XVI $b$ ).

The Egyptologists who were interested in the work and visited the site, were unable to give any solution of the function of these holes. For myself, I prefer to leave the problem unsolved than to give some false solution. It is wiser to give the facts in details and leave the whole to be examined later, hoping that some day one colleague might succeed in solving the problem.

During the clearance of the burial we found a body buried in the filling by the south wall, nearly in the middle about 2 metres higher than the floor of the place. The body was found intact, lying in a contracted attitude on the right side, his back upwards and his face downwards. The bones were in a bad state of preservation of a male adult ( pl . XVII $a$ ). On the same level in the south-east corner was found another body buried contracted on the left side, head to north looking to east. The bones were in bad state of preservation also of a male adult. On the same level to the north of this burial, we found a third burial cut in the side of the east wall in the form of a recess rectangular in shape. The body was found lying contracted on the left side head to north looking to east. The bones were in a bad state of preservation of a male adult (pl. XVII $b$ ).

Were these three male adults buried in their places as some of the owner's attendants? or were they buried in these places later and have had no relation with the owner of the tomb? Usually the subsidiary graves of the attendants are found round the superstructures of the tombs and not in such places where these three burials were found.
The objects found in the tomb are only fragments of pottery jars and of different stones for vases of the types known in the Ist Dynasty. The interesting objects we found, were three horns of an animal which is probably an ibex of a big size. Two of these horns were anciently restored (pl. XVIII a).

We have found many objects in different tombs of the Ist Dynasty, broken and skilfully restored by the ancient Egyptians ${ }^{(1)}$. In the case of horns,

[^5]this is the first time we came across any with such restoration. We usually found horns in tombs as part of a sacrifice either with the rest of the head or alone. In this case, these horns must have been put in the tomb as part of the objects which the owner will be in need of in the netherworld. To my mind these horns most probably were used during the owner's life as ornaments to the walls of his house. Perhaps he was a hunter who used to adorn his house with horns and skins of the animals he hunted in the same manner as in our days. Was he a professional hunter or was hunting as a hobby to pass his leisure?

If my idea of defunct adopting hunting as a hobby is correct, it shows that the higher class people in those times had the same amusements in their leisure as in our own days. Not only this, but it gives an idea of the degree of the refinement in their lives that was attained in that remote period.
The owner of this tomb, judging by the vast area in which his tomb was built, was most probably one of the high rank people or nobles of the Ist Dynasty.
To the west of this large tomb we came across a rectangular pit cut in gravel. We have not considered it as a tomb, although we were obliged to treat it as such for numbering, so we numbered it 679 like all the other tombs. It measures 12 metres from north to south, 6 metres from east to west and 1 m .70 deep. In it were found five circular buildings on equal distances from each other (pl. XVIII $b$ and XIX). These buildings look like the lower parts of large pillars at first sight, but when examined they were found built with one brick all round. Their diameter differed from 1 m .10 to 1 m .20 . They were found filled, one with gravel, and the second with Nile-mud alternatively. As they resemble the granaries found in the magazines of some of the big tombs ${ }^{(1)}$, one might think that these were built in this pit near by the big tomb to serve as a granary court for the use of the owner in the netherworld ${ }^{(2)}$ (pl. XVIII $b$ and XIX $a, b$ ).
${ }^{(1)} \mathrm{Z}_{\mathrm{AKI}} \mathrm{S}_{\mathrm{AAD}}$, The Royal Excavations at Saqqara and Helwan, p. 109, pl. XLIX and p. 111 , pl. LVII.
${ }^{(2)}$ Walter B. Emery, Excavations at Saq-
qara, Great Tombs of the Ist Dynasty, p. 82 and 83 , fig. 48 , p. 85 , fig. $5 o$, pl. 21 , 22,23 and 24 , Section CC, pl. 29 B. and pl. 30 A .

Tomb $n^{\circ} 683$ II 4 was found intact. It is rectangular cut in gravel and measures 1 m .15 from north to south, om .80 from east to west and om .8 o deep. In it was found the body wrapped in a mat which was tied up with a rope ( pl . XX $a, b$ ). Unwrapping the mat we found fine cloth in which the body was rolled ( pI . XXI a). Some of the cloth is very fine and show a great skill in weaving in this period. The body of the owner was unwrapped and found lying contracted on the right side, head to north looking to west. The bones were found in a bad state of preservation of an adult person ( pI . XXI $b$ ). The colour of the bones was grey-white and in the pelvis we found some material which a doctor identified as faecal matter.

In the debris of tomb n ${ }^{\circ} / 7{ }_{7} \mathrm{H} / 4$ we found an interesting piece of ivory representing a human hand (pl. XXII a). The artist


Right.


Wrong. who carved it seems to know something about anatomy as he represented all the details in the muscles, veins and bones. He did not forget to show the nails as quite natural on the skilfully shaped fingers. According to the type of the tomb, this hand is to be dated Ist Dynasty.

In tomb $n^{\circ}{ }^{10}$ / H 4 we came across an ivory spoon which is very delicately carved (pl. XXII $b$ ).

In the debris of tomb $n^{\circ}{ }_{2} 99 \mathrm{H} 5$. We found another spoon made of ivory. The handle is in the form of the hind leg of either a goat or a gazelle. The artist, although he tried to do his best to show his skill in the art of carving, yet he made a mistake as he represented the hoof in the wrong place (pl. XXII $c$ and fig. 6).

## SOME OF THE TOMBS

AND

# ObJEGTS FOUND DURING THE FIFTH SEASON 

(1946-1947)
IN

## the royal excavations at helwan

BY ZAKI SAAD.

We started the work of the fifth season on 11 th of November 1946 and closed down on 3 1st of May ${ }^{194}{ }^{4}$. During this period we uncovered 825 tombs of the Ist and IInd Dynasties. Of these 242 were found to be intact.
I will now describe some of the tombs of special interest, and some of the objects found in them.

Tomb n ${ }^{\circ}{ }_{1}$ H5. This, judging from its plan, is a IInd Dynasty tomb. The descent to it is a rectangular shaft cut in gravel. It measures 1 m .55 from north to south, o m. 90 from east to west and 3 m .50 deep.
On the west side and on the south side, at the bottom of the shaft, there were two blockings by mud bricks ( pl . XXIII $a$ ).

When we cleared the bottom of the shaft we found :

1. Fragments of alabaster of a table with its stand which were restored (pl. XXIII $b$, the two pieces on the right).
2. An alabaster vase with a patch on the bottom (pl. XXIII $b$, pieces next to the table).
3. A small votive slate vase ( pl . XXIII $b$ on the left).

When we removed the mud brick blocking on the west, the underground burial chamber was revealed. It measures 1 m .55 by 1 m .10 by o m. 90. It contained five skeletons, two to the north, and three to the south (pl. XXIII $c$, fig. 7 A).
The two skeletons $\mathrm{n}^{\text {os }} 1$ and 2 to the north :

1. This was lying contracted N . on its left side, with the head to the north. The bones were of a male adult and were in bad condition.
2. This also was lying contracted on the left side, with the head to the north, looking to the east. Again the bones were in poor condition and were of an adult female. On the neck of the female were found green and white cylindrical faience beads of a necklace with two branches and pear-like yellow stone pendant ( pl . XXIII $d, 1$ ).
The three skeletons $n^{\text {os }} 3$, 4 and 5 to the south :


Fig. 7 .
3. Was contracted on its left side, head to north, facing east. The bones were those of a child and were in poor condition.

On the left side were carnelian and faience beads of a bracelet (pl. XXIII $d, 3$ ).
Behind the pelvis was found a broken statuette of a kneeling man, holding a vase in his hands with arms outstretched. The kneeling person represents a hunch-back. He is holding the vase as if to offer its contents humbly to a great master (pl. XXIV $a, b$ ).
4. Skeleton lying contracted on left side, head to the north, looking east. Bones of a child in bad condition. On the neck were green faience beads for a necklace (pl. XXIII $d, 2$ ).
5. Skeleton lying contracted on left side, head to the north, looking east. Bones of a child in bad condition. On removing the blocking on the south side, an intact underground burial chamber revealed. It is rectangular in shape and measures 1 m . 5 o by o m. 90 by o m. 8 o .

It contains three skeletons ( $\mathrm{n}^{\text {os }} 1,2$ and 3 , pl. XXIV $c$ and fig. 7 B ).

1. Lying contracted on left side, head to the north, looking to the east. Bones of a young person in bad condition (sex not clear).
2. Body lying contracted on the left side, the head to the north, looking east. Bones of a child in bad condition.
3. Skeleton lying contracted on the left side, its head to the north, looking to the east. Bones of an adult female in bad condition. The pelvis and long bones show that this female was of stout built (pl. XXIV $c$ ).

Contents: By the head of $\mathrm{n}^{\circ} 1: 1-3$. Three tubular lime-stone jars, near the knees of $n^{\circ} 3: 4$. One tubular lime-stone jar.
This tomb is unusual in regard to the number of bodies buried in it. Generally, tombs of this period were used for one person but here we find eight: five in burial A and three in burial B.

There were one female, one male and three children in burial A. In burial B, there were a male (?) and a female with a child between them.

Were the person buried in burial A. a family consisting of the father, the mother and their three children? Also, the persons buried in burial B., were they the members of a family related to the other? Most probably each burial chamber was confined to one family who died under circumstances which obliged the people interested to bury each family in one burial chamber.

The objects found indicate that the burial took place according to the customs practiced in the period.

1. The ritual breaking of some objects is clear from what was found in the shaft in front of the mud brick blockages.
2. The female in burial A was buried with her necklace on her neck.

3 . The child $\mathrm{n}^{\mathrm{n}} 3$ in burial A was buried with the bracelet on the arm.

They placed by him, the ivory statuette which might have been one of the objects he was found of.

In burial B were found four tubular lime-stone jars. Nothing else was found.

Tomb no 3 H5. Intact, rectangular, cut in gravel. It measures, 1 m .40 by 1 m .15 by 2 m .10 , with a small recess on the north side measuring o m. $85 \times 1 \mathrm{~m} .15 \times 1 \mathrm{~m} .8 \mathrm{o}$. Body lying cont-


Fig. 8. racted on right side, head to the north, looking west. Bones of an adolescent in bad condition (sex not clear).

Although the tomb was found intact, the skull was found turned without the mandible towards the east. The mandible was in its place facing west.

It is not easy to give any explanation for such a slight partial disturbance while the rest of the body and objects were not touched (pl. XXV $a$ and fig. 8).

Contents : In front of face : 1-3. Three votive vases containing material (sent to the Cairo Museum laboratory for analysis).
The three votive vases were placed in a row in front of the face towards the west : $a, b$ and $c$.
a) An alabaster votive vase ( $\mathrm{pl} \mathrm{XXV} b, \mathrm{~A}$ ).
b) A slate votive tase in two parts (pl. XXV b, D).
c) An alabaster votive vase ( pl . XXV b, C).
2. Besides the vases : 4. One ivory stick for painting the eyes (pl. XXVI a, A), 5-7. Three nicely shaped ivory sticks for painting the eyes (pl. XXVI $a, \mathrm{~B}, \mathrm{C}$ and D$)$.
3. Between the pelvis and feet (8-17). Ten ivory bracelets (pI. XXVI $a$ ).
4. On a higher level were found fragments of an alabaster dish (pl. XXVI $b, d$ ).
${ }_{25} 51$. Plundered tomb. Descent from north to south in the form of 22 rough steps cut in gravel. It measures 15 metres in length and o m. 80 in width. The steps end in a rectangular space before the entrance to the burial place which measures $2 \mathrm{~m} .7^{5}$ north-south, 1 m .25 east-west. The height from the bottom to ground level is 7 m .8 o . On both sides are grooves which were cut for placing the portcullis. The door is o m .80 wide, and 1 m .50 high. It leads to a chamber 5 m .90 north-south, 1 m .65 east-west and 1 m .85 high. At the end is another door, $o \mathrm{~m} .8 \mathrm{o}$ wide and 1 m .25 high, which leads to a chamber measuring 3 m .10 north-south, o m. $9^{5}$ east-west and 1 m .25 high. To the west of this chamber is the burial place, 2 metres north-south, o m. 90 east-west and 1 m .25 high (plan 13 ).

Contents : 1. Fragments of a alabaster table with its stand (beyond reparation).
2. Fragments of a copper dish (beyond reparation).
3. Fragments of an alabaster dish.
4. A lime-stone roller, o m. 80 long and o m .20 in diameter in the middle while the two ends are about 0 m .10 in diameter.

68 H5. Intact tomb. Remains of superstructure, rectangular, built of mud bricks. It measures 3 m .3 o from north to south and 2 m .65 from east to west. The height could not be ascertained as the buildings are destroyed. On the east side is a corridor 2 m .70 running from north to south and 0 m .80 wide.

In the south part of the corridor is a cruciform chapel, while on the north there is a small niche (plan 14).

The descent was found to the south of the superstructure in the form of steps cut in gravel. These steps start a short distance to the south of the superstructure and lead into the buried chamber which is cut in the north, under ground. It is rectangular in form and measures 1 metre from north to south, o m. 65 from east to west and o m . 8 o deep.
The bulk of the superstructure was built after the owner of the tomb was buried, as the south wall was above the descent (plan 14).

The body was found lying contracted on the left side, head to the north looking east. Bones of a female adult in bad condition.

Traces of decayed wood in a rectangular form indicate, that the body was buried in a wooden coffin.

Contents : In front of the face (fig. $9 \mathrm{~A}, \mathrm{~B}$ and C , and pl. XXVII $a$ ).

1. One alabaster votive vase ( pl . XXVII $a, \mathrm{~A}$ ).
2. One alabaster votive vase ( pl . XXVII $a, B$ ).
3. One alabaster bowl in two parts (pl. XXVII $a, \mathrm{C}$ ).

On the hand: 4. A bracelet of carnelian and agate (pl. XXVII b).
5-10. Six thin bracelets made of horn in bad condition and one in fragments ( pl . XXVII $b$ ).

Near the pelvis : 10-13. Four tubular lime-stone dummy vases.

84 H5. Intact tomb. Shaft rectangular cut in gravel. It measures 1 metre north-south, $o \mathrm{~m} .80$ east-west and is $o \mathrm{~m} .80$ deep. The underground burial chamber is to the south. It measures 0 m .90 east-west, o m. 70 north-south and is 0 m .80 high.

The body was found lying contracted on left side, head to the west, looking north. Bones of a female adult in bad condition (fig. 10 ).

Examining the body, we found by the pelvis a bony object which was identified by doctors as a bladder stone ${ }^{(1)}(\mathrm{pl}$. XXVII $c)$.

Tomb 150 H 5 . Plundered and set on fire because the mud bricks of the entrance and the upper parts of the burial chamber walls were changed to red bricks. The ancient Egyptians never used red bricks in this period, therefore the only explanation of the presence of the red bricks is that the place was burnt out.
${ }^{(1)}$ The report on the bones by Dr. Kamel Bey Hussein, p. 3o-31.

The descent is 6 m .80 long and 1 m .30 wide, from north to south. There are $1 / 4$ steps cut in gravel.

In the filling of the steps, to the north of the mud bricks blockage of the entrance, was found a body (pI. XXVIII a). It was lying contracted on the left side, head to the south, looking to the west. The bones of an adult female are in bad condition.
Contents : In front of face : 1-2. Two pottery jars, type 3.

In front of feet : 3. One tubular pottery jar, type 64.
Near the pelvis : 4. One pottery bowl, type 38 .
Behind the back: 5. One pottery bowl, type 46 .
The rectangular burial chamber is cut in gravel (pl. XXVIII $b$ ). It measures 7 m .50 from north to south, 3 m .20 from east to west and is $2 \mathrm{~m} .20+$ 2 metres high.



Fig. ${ }^{10}$.

There are two 0 m . 50 wide ledges, one on the east and one on the west. These ledges were for the wooden beams bearing the roof. Traces of decayed wood were found on the ledges.

In the floor of the burial chamber were found five holes on the east and west sides (pl. XXVIII $b$ and plan 15 ). In four of the holes on the west side, we found traces of the wood. These holes probably held wooden pillars to support the roof as the ledges which were of gravel were not sufficiently strong to hear the heavy weight of both the roof and the filling on it.

Remains of brick walls above ground level in a rectangular shape indicate a superstructure which measures 14 m .80 from north to south and 7 m .20 from east to west (plan 15).

Contents: In the debris were found fragments of alabaster and slate. One fragment of slate was part of a bowl. It bears the name of king "Kâ" who was the last king in the Ist Dynasty ${ }^{(1)}$ (pl. XXIX $a$ and fig. 11) ${ }^{(1)}$. No other fragments were found.
The inscriptions on this piece was engraved with great skill. It shows

[^6]also that writing was very advanced in this period ${ }^{(1)}$. A very well shaped image like the falcon surmounting the serekh containing the name of the king could not be achieved but by a very skilful artistic hand which must have practiced such work for many years ${ }^{(2)}$.

Restoring the alabaster fragments we obtained the following pieces :

1. One alabaster dish (pl. XXIX $b$ A).


Fig. 11.
2. One alabaster bowl (pl. XXIX b B).
3. One alabaster bowl (pl. XXIX $b \mathrm{C}$ ).
4. One alabaster bowl (pl. XXIX b D).

Some mud pottery stoppers were found bearing badly effaced and illegible impressions.

Tomb $\quad 189 \mathrm{H} 5$. Intact, rectangular built of mud bricks. It measures 1 m .15 north-south, o m. 60 east-west and is $o \mathrm{~m} .60+1$ metre high. To the east of the burial are two magazines, one to the north and one to the south.

The northern magazine measures 0 m .50 north-south, 0 m .30 east-west and is $0 \mathrm{~m} .60+1$ metre high. The southern magazine measures $o \mathrm{~m} .6 \mathrm{o}$ north-south, 0 m .30 east-west and is $0 \mathrm{~m} .60+1$ metre high.
Body lying contracted on left side, head to the north facing east. Bones of a male adult, in a bad condition ( $\mathrm{pl} . \mathrm{XXX}$ ).

Contents : On the south wall of the burial place :

1. One pottery jar, type 3 .

Below it, in the west corner, in the burial chamber : 2. One pottery jar, type Ci.

In the east corner : 3. One pottery dish, type 48.
Near the head : 4. One slate palette (broken).
In front of face : 5. One pottery dish type 49.
On the feet and pelvis : 6. One pottery dish (broken) type 41.
Below it : 7. A slate plate broken (pl. XXXI a A).
${ }^{(1)}$ See W. B. Emery and $Z_{\text {aki }}$ Satid $^{\text {a }}$ The tomb of Hor-tha, p. 76.
${ }^{\text {(2) }}$ Exgelbacu, Introduction to Egyptian Archaeology, p. 20.

Behind it : 8. One tubular alabaster jar (pl XXXI $a \mathrm{C}$ ). (contained material sent from analysis).

In northern magazine : 9-10. Two pottery jars, type 3 .
11. One alabaster bowl (pl. XXXI a D).

12-17. Six pottery jars, type C 1.
In southern magazine : 18 . One pottery jar, type 3 .
19-21. Three pottery jars, type 11.
Below them : 22. One slate dish (pl. XXXI $a \mathrm{~B}$ ).


Fig. 12 .

207 H5. Plundered tomb, rectangular cut in gravel measuring 1 m .20 from north to south, 0 m .70 from east to west and 2 metres in depth.

Contents: 1. One cylinder seal of soap-stone, o m. o19 long and o m. o 15 in diameter. It is bored lengthwise as if it had been hung on a string (pl. XXXI $b$ and fig. 12).

The inscriptions on it are well cut.
2. One tubular alabaster jar (broken) (pl. XXXII $a$ A).
3. One tubular alabaster jar (broken) ( pI . XXXII $a \mathrm{~B}$ ).

1. One alabaster dish (broken) ( pl . XXXII $a \mathrm{C}$ ).

5 . One slate dish (broken) ( pl . XXXII $a \mathrm{D}$ ).
6. One slate bowl (broken) (pl. XXXII $a \mathrm{E}$ ).
7. One pottery jar (broken), type 3 .

8-11. Four pottery jars, type C 1.
12-15. Four pottery jars, type 64.
16. One pottery jar, type 11.

257 H 5 . Intact tomb, rectangular cut in gravel measuring 1 m .75 north-south, 1 metre east-west and 1 m . 40 in depth. Body lying loosely contracted on the left side, head to the south looking east. Bones of an adult male, in bad condition ( pl . XXXII $b$ ).

Traces of decayed wood indicate that the body was buried in a wooden coffin.

Contents : South of the head : 1. One pottery jar, type 3.

In front of the hands : 2-3. Two flint implements.
In front of the knees : 4. One pottery jar, type 3.
North of the feet : 5-9. Five alabaster dished A, B, C, D and E (broken and restored) (pl. XXXIII $a$ ).

Examining the body, we found under the ribs, a bony object which was identified by the doctors as kidney stone ${ }^{(1)}$ ( pl . XXXIII $b$ ).
$263 H 5$. Plundered tomb. The descent 2 m .40 long and 1 m .10 wide, is from south to north, in the form of steps cut in gravel. The burial chamber, built of mud bricks lies to the north. It measures 5 metres from north to south, 3 metres from east to west and is 3 m .20 deep. The part to the east in the burial chamber was undisturbed by the robbers (pl. XXXIV).

Conteyts : 1. A group of vases consisting of :
1-14 Fourteen tubular alabaster jars, all intact and in a very good state of preservation ( $\mathrm{pl} . \mathrm{XXXV}$ A, B, C, D, E, F, G, H, I, J, $K, L, M$ and 0 ).
15. One porphyry vase ( pl . XXXV N).
16. One alabaster bowl (pl. XXXV P).
17. One dolomite vase ( $\mathrm{pl} . \mathrm{XXXV} \mathrm{Q}$ ).
18. One dolomite bowl (pl. XXXV R).
19. One slate votive plate ( pl . XXXV S).
2. A group of gaming pieces consisting of :

1-7. A set of seven alabaster draughtsmen in the form of cones (pl. XXXVI a, uppervrow).

1-7. A set of seven semi-circular alabaster draughtsmen (pl. XXXVI $a$, second row).

1-6o. Sixty beads of different shapes, colours and material ( pl . XXXVI $a$, the lower four rows).

In some plundered tombs, we used to find round beads of alabaster and other material which were not pierced. I used to consider them, beads placed in the tombs to be used by the owner of the tomb in making necklaces in the other world.

Finding this lot with the set of draughtsmenmade me think that these beads were meant as counters for a game; exactly like the chips or counters used in playing poker or other games in our days.
3. A group of ivory pieces which might have been incrusted on the sides of a wooden box.
4. A group of pottery dishes in fragments, the number of which might be approximately 10. All of the dishes are of one form (type 47).

5 . By the pottery dishes were found 18 flint implements (pl. XXXVI $b$ ).
6 . Between the pottery dishes and the wall was found a head which looks like the head of either a goat or gazelle. An expert identified it as an Ungulata.
${ }_{2} 70 \mathrm{H} 5$. Intact tomb, rectangular cut in gravel; it measures 1 m .25 from north to south, 0 m .70 from east to west and is 1 m .10 deep.
Body lying contracted on the left side, head to the south, looking west. Adult male, bones in bad condition (pI. XXXVII $c$ ). Traces of decayed wood indicate wooden coffin.

Contents: In front of the face : 1. One shell.
2. One pottery jar, type $\mathrm{P}_{1}$.
3. Fragments of pottery dish.

Behind the head: 4. Rectangular slate lid.
5. Rectangular slate box with two compartments (pl. XXXVII $a$ and $b$ ). This piece is most probably an ink pot for a scribe. The lid fits the box very tightly (pl. XXXVII b). The two compartments were undoubtedly for black and red ink.
Behind the feet: 6. One pottery jar, type 11.
$7^{-8}$. Two pottery jars, type $\mathrm{P}_{1}$.
32 3 H 5 . Intact tomb, rectangular cut in gravel. It measures 1 m .40 north-south, o m .80 east-west and is 1 m . 50 deep.

Body of an adult female, lying contracted on the left side, head to the south, looking west. Bones in bad condition (pl. XXXVIII a).

Contexts : Behind the back : 1. One slate palette (pl. XXXVIII a).
2. Fragments of alabaster and slate.

To the south : 3. One alabaster vase (pl. XXXVIII $b$ A).
4. One alabaster vase (pl. X\XVIII $b$ B).
5. One alabaster spouted bowl (pl. XXXVIII $b \mathrm{C}$ ).

In front of the face :
6. One ivory comb (pl. XXXVIII $c$ ).

On the left hand :
7. Beads of carnelian, agate, and two shells of a bracelet (pl. AXAVIII d).

440 H 5 . Plundered tomb, rectangular cut in gravel. It measures 1 metre from north to south, 0 m .60 from east to west and is 0 m . 60 deep.

Contents : 1-4. Four necklaces of green round and flat faience (pl. IXXIX a).
5. A pottery model boat.
6. A pottery bowl, type 48.
7. One broken wheel of faience. In the circle there are eight spokes quite similar except one (pl. <br>XIT $a$ and $b$ ).

Studying the wheel-like object (fig. 13 A), it came to my mind that, without the surrounding, with the dissimilar one pointing downwards (fig. 13 B ), the whole gives the impression of a palm-tree (trunk and crown) (fig. 13 C and D).
The artist who produced this nice piece, most probably for a decorative purpose, must have been influenced by the beauty of palm-trees ${ }^{(1)}$. So, he thought of representing a palm-tree placed in a circular frame. The centre of the circle is the junction of the trunk and the branches in the shape of a smaller circle with a hole in the middle (pl. AXXIX b), so it can be easily hung as an ornament.
$5_{97} \mathrm{H} 5$. Intact, rectangular tomb cut in gravel. It measures 1 m .40 north-south, o m. 90 east-west and is 0 m .80 deep. Body of a child lying semi-contracted on the left side, head to the south, looking west. Bones in bad condition. Traces of wood indicate that the child was buried in a wooden coffin (pl. XL $a$ ).

[^7]London ${ }^{1941) .}$
See : Vivi Jãchholm and Mohammed Drar, Bulletin of the Faculty of Science, no. 38, P. $210-21$ t.

Contents : In front of the face : 1 . One alabaster bowl, intact ( $\mathrm{pl} . \mathrm{XL}, b \mathrm{C}$ ). Behind the head : 2. One pottery jar, type $\mathrm{P}_{2}$.


Fig. 13.
Behind the back: 3. One pottery jar, type 47 .
4. One pottery jar, type C 1 .
$5-6$. Two pottery jars, type 11.
Behind the pottery jars : 7. One tubular alabaster jar, broken (pl. \L $b \Lambda$ ). Behind the left foot : 8. One alabaster vase with a lime-stone lid (pl. XL $b \mathrm{D}$ ). 9. One alabaster bowl (pl. XL $b$ E ).

In the north-west corner : 10. One tubular alabaster jar (pl. XL $b$ B). Behind the right foot : 11. A group of six ivory bracelets (pI. XLI E). Near the bracelets : 12. A broken ivory statuette of a sitting child putting the finger of his right hand in his mouth while the palm of his left hand is placed on his left knee (pI. XLI D, XLII $a \mathrm{~A}$ and $b \mathrm{~A}$ ) ${ }^{(1)}$.
13. A fragment of a smaller statuette of a child (pI. XLI C).
14. A vase with a handle in the form of a duck in one piece, sculptured in ivory (pl. XLI B, XLII $a$ B and $b$ B).
Near the ivory objects : 15 . An object in the form of a ram's head made of green diorite ( pl . XLI A, XLIII $a$ and $b$ ).

621 H5. Intact, rectangular tomb cut in gravel. It measures 1 m .10 north-south, o m. 70 east-west and is 1 m .20 deep. There are four ledges of gravel 0 m .20 wide and 0 m .60 high on the four sides of the burial. These ledges were to hold the roof. Body of an adult male, lying tightly contracted on the right side, head to the north, looking west. Bones in bad condition (pl. XLIV a).

Contents : In front of the face: 1. One tubular alabaster jar (pl. XLIV b).
2. One pottery jar type 76 .

Near the head : 3. One alabaster vase (pl. XLIV $b \mathrm{C}$ ).
Behind the head : 4. One alabaster bowl (pl. XLIV $b$ B).
By the shoulder : 5. One alabaster votive plate (pl. XLIV $b \mathrm{D}$ ).
Under the alabaster vase : D: 6. One ivory comb with a case made of straw (pl. XLIV c).
$63_{9} \mathrm{H} 5$. Intact, rectangular tomb built of mud bricks. It measures 1 m .10 north-south, 0 m .70 east-west and is $1 \mathrm{~m} .55+0 \mathrm{~m} .50$ deep, with ledges along the sides, 0 m .50 high and 0 m .10 wide, to support the roof. On the south side a magazine built of mud bricks and separated from the burial place by a 0 m .20 wide mud brick wall.

Body of an adult male, lying contracted on the left side, head to the south, looking west. Bones in bad condition (pI. XLV a).
${ }^{(1)}$ Petrie, Abydos, part II, 1903 , pl. II, no. 8 and III, no. 16.

Contents: Close by the fingers : $1-5$. Five ivory sticks, about o m. ${ }_{2} 5$ long. One of them has a hole at one end. They are all designed in imitation of reeds ( pl . XLV $b$ ).
Dr. H. Hickmann's idea about them is that these were for some musical purposes.

By the head : 6. One pottery jar, type 74 .
In the south-west corner : 7. One pottery jar, type $\mathrm{P}_{1}$.
In the north-east corner : 8. One pottery jar, type $\mathrm{P}_{1}$.
In the magazine : 9-10. Two pottery jars, type 11.
11-12. Two pottery jars type 43.
667 H5. Intact, rectangular tomb, cut in gravel, measuring o m. 90 north-south, o m .55 east-west and o m .40 in depth.
Body of a dog, lying contracted, head to the south, looking west. Bones in good condition. It was buried in a wooden coffin (pl. XLVI a).

668 H 5 . Intact, oval tomb cut in gravel. It measures o m. 6 o northsouth, o m. $3_{7}$ east-west and is o m. $7^{0}$ deep.

In the south part was found a wooden box with its lid. It is o m. 16 long, o m. og 5 wide and o m. 125 high. When it was discovered, the wood was in a very bad state of preservation. We treated it with gomolakka and paraffin wax until we were able to lift it from its place (pl. XLVI $b$ ). When opened, it was found to contain the skeleton of a bird (pl. XLVI $c$ ).
This wooden coffin is to be considered one of the most ancient coffins in existence, if not the only of its kind. It is from the Ist Dynasty.

719 H5. Plundered tomb, more like a trench cut in gravel. It measures 5 m .50 north-south, o m. 65 east-west and is 1 m .70 deep. Remains of the bones of more than one donkey. After our experience during the third season ${ }^{(1)}$, we have been able to identify the bones immediately as donkeys' bones (pl. XLVII $a$ and $b$ ).

[^8]Mohamed Effendi Abd-el-Tawab el-Hitta ${ }^{(1)}$ from the Agriculture Museum who examined the skeletons confirmed the identification.

720 H5. Intact, rectangular tomb cut in gravel. It measures 0 m .95 north-south, o m. 75 east-west and is 1 m .10 deep.
Contevts : Animal neck bones and some ribs (pl. XLVIII a).
These bones are different from the bones I have seen before. They were examined by Mohamed Effendi Abd-el-Tawab el-Hitta on 12 th of May $19 / 4$. He identified them as camel bones ${ }^{(2)}$.

Camel bones have never before been found in any excavations. During the excavations of the Egyptian University on the Neolitic site at Maadi, directed by H. E. Mustafa Bey Amer, was found a head of an animal made of pottery. This head was identified by Dr. Junker as a camel head ${ }^{(3)}$. In Fayum, Miss G. Caton Thompson found a cord made of camel wool ${ }^{(4)}$.

Dr. Nagib Georgy, chief of the anatomy section of the Faculty of Veterinary Medicin examined the bones and reported that they are : "Some parts of the skeleton of a camel, namely :

1. Neck bones from the 3rd to the $7^{\text {th }}$ (five bones) and the front part of the and neck bone (pl. \LVIII $b$ ).
2. The first seven spinal bones (pI. \LI\a).
3. Eight ribs which could not be put according to order because of loosing the identifying signs and atso because some of their parts are worn off by time (Ist Dyn. 3200 B. C.) (pl. XLIX b).

722 H 5 . Intact, rectangular tomb cut in gravel. It measures 2 m .50 north-south, 1 m .60 east-west and is 1 m .20 deep.

Body of an adult female lying contracted on left side, head to south, looking west. Bones in bad condition. Traces of wood indicate that the body had been buried in a coffin. This coffin is unique in its size. It was not made

[^9]for the body only, but for the objects which were buried with the body. The coffin was nearly filling the area of the burial place ( $\mathrm{pl} . \mathrm{L}$ ).

When the objects were removed, the floor of the coffin was quite clear. At first I thought that the sides of the burial place had been panelled with wood like those of some of the big tombs, one of which is no. $407 \mathrm{H} 4{ }^{(1)}$. But, after removing the objects and finding that the ground was covered with wood under the body and the objects while there was a small space between all the sides of the burial place and the wooden floor; there was no doubt about the big size of the coffin which contained the body of the owner of the tomb and all his belongings, which he wanted in the other world (pl. LI).

Contents: By the head: 1. One pottery jar, type 11.
In front of the body: 2. One alabaster dish broken (pl. LII H) (broken and restored).

Under it : 3. Bones of a goose ${ }^{(2)}$.
4. One slate dish (pl. LII A).
5. One alabaster dish (pl. LII, I).
6. One pottery dish, type 39 .

7,8 and 9 . Three pottery dishes, type 47.
10 and 11 . Two pottery jars, type 11.
12. One alabaster vase (pl. LII E).
13. One tubular alabaster jar (pI. LII F).
14. One alabaster vase (pl. LII K).
15. One flat alabaster votive plate (pl. LII G).
16. One shallow tubular alabaster jar (pI. LII L).
${ }^{17}$. A group of 6 copper needles (pl. LIII a).
Behind feet of pelvis 18, 19 and 20. Three tubular alabaster jars (pl. LII B G and D).
20. One alabaster vase (pl. LII J.)

22, 23 and 24. Three pottery jars, type 3.
In north-west corner : $25-30$. Six pottery jars, type 4.
$31-33$. Three pottery jars, type 74 .
By the west wall: 34. Group of 13 flint implements (pl. LIII b).
(1) See the same publication, p. 12.
${ }^{(2)}$ Mohammed Eff. Abd-el-Tawab el-Hitta
examined the bones and found them to be those of a goose.

741 H5. Intact, rectangular tomb, built of mud bricks. It measures 1 m .35 north-south, o m. 70 east-west and is $0 \mathrm{~m} .70+1 \mathrm{~m} .40$ deep and has four ledges to support the roof. Two equal magazines to the south, one east and one west.
These magazines measure 0 m .75 east-west, 0 m .50 north-south and are $0 \mathrm{~m} .70+1 \mathrm{~m} .40$ deep.

Body of an adult male lying contracted on the left side, head to the south, looking west. Bones in bad condition (pl. LIV).

Contents : In the burial chamber around the body (pl. LV).
South side from the east :

1. One tubular alabaster jar (pl. LV I).
2. One alabaster vase ( pl . LV J).
3. One pottery jar type 11 .

On top of 3: 4. One alabaster dish with an old patch on the rim ${ }^{(1)}$ (pI. LV H).
5. One white sand-stone plate which was broken and restored in old times (pl. LV F) ${ }^{(2)}$.
Under $5: 6$. One slate dish (pl. LV G).
Under 6 : 7. One stone (?) dish (pl. LV L).
Under 7 : 8. One alabaster dish (pl. LV E).
Under $8: 9$. One alabaster dish (pl. LV K).
Under the previous : 10-13. Four pottery jars, type C 1.
Under the previous towards west side :
14-18. Five tubular pottery jars, type $Q_{1}$.
19-20. Two pottery jars, type J 4.
In front of the knees :
21. A group of 15 alabaster row beads (pl. LVI $a$ ).
22. One copper piercer (pl. LVI $b$ A).
23. Group of nine flint implements (pl. LVII a).
24. One copper dish (pl. LV C).

On 24: 25. A group of ten copper fishing hooks (pl. LVI $b$ B).
Beside $24: 26$. Two pear-shaped lime-stone weights for fishing (pl. LVI $b, \mathrm{C})$.
(1) Zaki Sadd, The Royal Excavations at Saqqara and Helwan, p. ${ }^{2} 7$, pl. XVII.
${ }^{(2)} \mathrm{Zaxin}_{\mathrm{A}}$ Sadd, The Royal Excavations at Saqqara and Helwan, p. ${ }^{27}$, pl. XVII.

In the north of $24: 27$. One spouted slate bowl (pl. LV B).
28. One tubular alabaster jar (pl LV A).

In the north-east corner : 29. One pottery jar, type 11.
In the north-west corner : 30. One pottery jar, type 11.
In the east magazine : $31-34$. Four pottery jars, type 3.
35-36. Two pottery jars, type 11 .
In the west magazine : $37-39$. Three pottery jars, type 11 .
40. One clay model of granary bins surrounded by a wall (pl. LVII b).

## Fuxeraiy Bamks.

Funerary barks were considered to be used only for kings' tombs in the IVth and Vth Dynasties until the discovery of the large tombs in the Archaic necropolis north of Saqqara. To the north of the tomb of King Hor-Aha was found a brick grave or casing for a wooden bark ${ }^{(1)}$. To the north of the tomb of Hemaka a similar structure was found.

In the Royal Excavations at Helwan we discovered 6 graves for wooden barks, near the tombs the description of one of which is already published ${ }^{(2)}$. These tombs cannot be compared with those discovered at Saqqara as their size is smaller.
The conclusion is that the funerary barks, whether called solar barks are not, were not for kings or for high officials only, but also for ordinary individuals, some of whose tombs we are going to describe.

Tomb no. 649 H 5 . Plundered, with a descent from the south in form of 7 steps, well built of mud bricks 7 m .5 long. The rectangular burial chamber built of mud bricks lies northward. It measures 3 m .3 o by 2 m .10 by $2 \mathrm{~m} .30+2 \mathrm{~m} .7^{0}$. The walls are mud plastered and in a good state of preservation. To the north of the burial chamber there are two magazines, one east and one west. To the south are two similar ones (pl. LVIII $a$ and $b$ ).
There was a superstructure above the burial chamber and magazines. Traces of the mud bricks indicate a gallery and an outer wall (plan 16).
(1) Emery and Zaxi Sadd, The Tomb of Hor-Aha at Saqqara, p. 8 and 9, pl. 3 .
${ }^{(2)}$ Zaki Sadv, The Royal Excavations at Saqqara and Helwan, p. 111, pl. XI.

To the east a grave boat was found. It is 13 m .50 long and 1 m . 50 wide (plan 16). Traces of wood show that a funerary bark was placed to the east of the tomb to be used by the owner in the netherworld (pl. LIX a).

The owner of this tomb is not to be compared with either King Hor-Aha or the high official Hemaka although he was provided with a funerary bark cxactly as they were.

Tomb 68o H5. Plundered, with a descent from south in the form of steps 4 m .20 long and o m .80 wide cut roughly in gravel. The rectangular burial chamber is cut in soft rock. Four o m. 3 o wide ledges are on the four sides. These ledges were to support the roof. Above the four ledges were built mud brick walls to the ground level. Traces of mud brick buildings above indicate a superstructure with a gallery all round (plan ${ }^{1} 7$ ).
To the south was found a grave boat. It measures 9 m .50 in length and 1 m .3 o in width (pl. LI\ $b$ ). Traces of wood indicate that a wooden funerary bark was placed in it to be at the disposal of the owner of the tomb.

Tomb $762 \mathrm{H}_{5}$. Plundered, rectangular, built of mud bricks. It measures 2 m .40 north-south, 1 m .60 east-west and is $1 \mathrm{~m} .60+1 \mathrm{~m} .90$ deep. There are two magazines to the north, one east and one west, each measuring o m. 90 by o m. 90 by $1 \mathrm{~m} .60+1 \mathrm{~m} .90$. To the south there are two similar magazines. To the north of this tomb was found a grave boat, 10 metres long and about 1 m .20 wide. Traces of wood indicate wooden funerary bark (pl. LX and plan 18).
Apart from these actual funerary barks there were found models of boats of ivory ${ }^{(1)}$ (pl. LXI $a$ and LXI $b$ ), stone ${ }^{(2)}$ (pI. L\II $a$ and LXII $b$ ), and pottery (pI. LXII $c \mathrm{~A}$ and B ).
All these facts, regarding the actual funerary barks as well as the models, are definite evidence of the existence of the funerary barks in the archaic period. The question of whether they should be called solar or funerary barks will be the subject of an other study.
${ }^{(1)}$ See Zani Sind, Royal Excavations at Saqqara.and Helwan, p. 27, pl. XIV $a$. See R. M: chramallah, Ein Cimetière Archä̈que de la Classe

[^10]
## Interesting objects.

In tomb no. 24 II5 was found a spouted alabaster jar (pl. LXIII $a$ ). The spout was made with a movable stopper. If the stopper is placed in the spout, the liquid comes out of the spout in drops. The spout is photographed by the side of the jar.

In tomb no. ${ }^{2} 79 \mathrm{H} 5$ was found a nicely shaped flint knife (pl. LXIII b). The flint out of which it was cut is of superior quality. The form is elegant and shows a high degree of skill in cutting flint. Although it was found broken into three pieces, yet when it was restored, its elegance amply justified the work achieved. It measures about 0 m .50 and is considered the longest flint knife which has been discovered until now.

In tomb no. 683 H5
 were found slate fragments of two dishes. When the pieces were put together, we found that the collection of antiquities was enriched by two very elegant slate dishes (pl. LXIV a A and B). Dish A is like one found in Abydos ${ }^{(1)}$.

Among the debris of tomb 728 H 5 we found a number of ivory pieces, some of which bear inscriptions. We put the pieces together and the result was the upper part of an ivory label; the lower part is missing (pl. LXIV $b$ and fig. 14).

The group of inscription is the name of Neit-Hotep the Queen of Lower
(1) Flunders Petare, The Royal Tombs of the Earliest Dynasties, 1901, Part II, pI. I.

Egypt who was married to King Hour Aha (Mena) and thus the two parts of Egypt were united ${ }^{(1)}$.
In the debris near the big tomb no. 785 was found a cylinder seal made of haematite (pl. LXIV $c$ ).


Fig. 15. This cylinder seal bears one inscription (fig. 15).

In tomb 36 H 5 we found the remains of a skeleton which was wrapped in a woolen cloth. The wool is not known to have been used in Egypt. This is the first time to find a defunct rolled in woolen cloth.
In some of the tombs we found the skeletons in good condition and on the skulls the hair is still exist. Some of the hair was blond, chestnut and grey (pI. LXV $a$ and LXV $b$ ).

## Pottery.

The pottery jars, dishes, vases and other objects which we found in the tombs are all similar to what was found before in other Ist Dynasty sites like Abydos and Saqqara. We have classified them into types and referred to each when we were dealing with the contents of pottery in the tombs. Some of the pottery types are given letters $\mathrm{A}, \mathrm{B}, \ldots$ to Z and then $\mathrm{AA}, \mathrm{BB}, \ldots$ to ZZ (pl. LXVI, LXVII, LXVIII, LXIX and LXX).

Other types are given nos. 1-2-3 and end with 78 (pl. LXXI, LXXII, LXXIII and LXXIV).

## Human Remains.

The skeletons found in the tombs are sometimes of great interest to doctors who are been on scientific research. Prof. D. Derry and H. E. Dr. Kamel Bey Hussein have found interesting material in the bones they have examined. Some of the skulls are still waiting their turn to be examined and measured. I am giving here photographs of some of them (pl. LXXV $a$, LXXV $b$, LXXVI $a$, LXXVI $b$, LXXVII $a$ and LXXVII $b$ ).
The report of Dr. Kamel Bey Hussein is published on pages 45 and 46 .
(1) Drıoton et Vandien, Les peuples de l'Orient Méditerranéen, II, L'Égypte, p. 137 et 13 g .

## A DESCRIPTION OF SOME BONES EXAMINED

## BY

KAMEL BEY HUSSEIN.

The pathological specimens discovered during this season consist of :

1) A tibia of an adult which shows thickening of the upper third of shaft (pl. LXXVIII). The swelling is smooth and concentric gradually passing on to the normal shaft. Radiograms show definitely that it is not the result of old injury nor is it a tumour. It is unmistakably a case of chronic osteo-periostitis. At the present time such a bone showing this lesion in the upper $1 / 3$ of the tibia would be considered syphilitic. The presence of syphilis among ancient peoples is disputed by many authorities and before deciding that this case is caused by this disease other cases of a similar nature would have to be discovered. Syphilis is polymorphic and can simulate and be simulated by other diseases. This case must, therefore, be considered as very probably but not undoubtedly syphilitic.
2) A specimen of a femur belonging to an adult which shows a comminuted fracture of the middle of the shaft (pl. LXXIX). The circumstances of its discovery make it certain that it was not fractured during the excavation. The fracture, however, shows no sign of any reaction and this patient must have died very soon after the injury.
3) Several stones which were found in the pelvis and around the ribs (pl. LXXX A, B, and C). The one in the pelvis is oval in shape the size of om .055 by o m. o35. From its position in the body it must have been a stone of the bladder. The X-rays show an outer shell which encloses a large number of smaller stones inside. Such an appearance is almost unknown
in stones of the bladder. Chemical analysis (by Dr. Reidy) showed absence of N2 which may be due to complete desintegration of all organic matter and some crystals suspicious of oxalates.

Other stones showed appearances very suggestive of kidney stones of which the bigger part would be in the renal pelvis and the smaller part in a calyx with a constricted neck between them ( pl . LXXXI A).

Other stones are most probably stones of the bladder some of them give the appearance of having been formed in a saccule of the urinary bladder (pl. LXXXI B).

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a. Roof of west magazine with blocks of stone like palm-tree trunks.

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a. The stone piece with the holes.

b. Nine mallets of stone of different sizes.

a. Two big mallets of stone.

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a. The north mud brick magazines and the north block of the burial chamber.

b. The east side of the burial chamber showing the small block of the robber's tunnel.

a. The layers of ribs, alabaster jars and flint knife in the magazine.

c. The two flint knives as they were found at the bottom of the magazine.

b. The flint knife found by the ribs of the sacrifice below the first layer.


The two knives which were found in the bottom of the magazine.

a. The door of the tomb blocked with mud bricks.

b. Intact tomb $\mathrm{n}^{\circ}{ }_{116}$ : the owner, the north magazine and the objects.


Alabaster vases A, B, C, D, E, F, G and H.

a. The ivory column with the lotus flowers.

b. Three schist dishes and one pottery jar. A, B, C and D.

c. Portcullis blocking the door of the tomb sos.

a. Pottery jar, clay stopper with the impression of a cylinder seal.

b. Pottery jar, clay stopper with the impression of a cylinder seal.

a. Pottery jar, clay stopper with the impression of a cylinder seal.

b. The four lime-stone rectangular pieces.


a. The inlaid coffin; the shells, ivory small pieces and the black material are visible.


a. A view of the tomb showing the holes in the bottom and the north part which is higher than the burial chamber (from south to north).

b. The hole in which the pottery jars were found.

a. Body found by the south side.

b. The two burials, one in the south-east corner and the other to the north in a recess cut in the east side.





Section Looking West
Tomb No. 679 H. 4
The five circular buildings.





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a. The ivory hand.

a. Blockings of mud bricks and pieces on the floor of the shaft.

c. Skeletons in the west burial place.

b. The alabaster table, vase with patch and votive slate vase.


The two faience necklaces and the bracelet.

a. The ivory statuette (face).

b. The ivory statuette (profile).

c. Burial to south showing ; skeletons and some stone vases.

a. The skeleton with the skull
turned towards east, and the objects.

$b$. The three votive vases $a, b$ and $c$.

a. The ivory A, B, C and D and the ten ivory bracelets.

b. Alabaster dish.

a. Three alabaster votive vases.

b. Five horn bracelets in bad condition and one in fragments. The carnelian bracelet.

c. Stone in bladder.

a. The skeleton surrounded by the pottery objects and the mud bricks blocking the entrance.

b. The burial chamber with the holes by the sides in the floor.

a. King Ka in the serekh with the falcon upon it.

b. Alabaster dish and bowls A, B, C and D.


Skeleton in burial place with the objects; to east are the two magazines.

a. Slate plate and dish; alabaster jar and bowl (A, B, C and D).

b. Cylinder seal.

a. Alabaster jars (A, B) and dish (C); slate dish (D) and bowl (E).

b. Skeleton and objects.

a. Five alabaster dishes.

b. Kidney stone.



Group of vases: A, B, C, D, E, F, G, H, I, J. K, L, M, N, O, P, Q, R, S.

a. The two alabaster gaming draughtsmen and the sixty round beads.

b. Group of 18 flint implements.

a. The inkpot with the 2 compartments (and the lid beside it).

b. The inkpot with the lid on.

c. Body with objects round. The slate lid and box are behind the head.

a. Skeleton and objects.

b. Alabaster vases and bowl : A, B and C.

c. Ivory comb.

d. Bracelet of carnelian agate and two shells.
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b. The wheel.

a. The body surrounded by the objects.

b. Alabaster objects : A, B, C, D and E.


The statuettes, bracelets and necklace.

a. Ivory pieces : A, B.

b. Ivory pieces : A, B.

a. Head of a ram (back).

b. Head of a ram (face).

a. Body with objects round.

c. Ivory comb and straw case.

b. Alabaster objects : A. B, C and D.

a. Body with ivory sticks by the fingers.

b. The five ivory sticks. The imitation reed designs are clear.

a. Skeleton of the dog.

b. Box with lid.

c. Box with the skeleton; the lid is by it.

a. The bind part of the donkey.

b. The front legs of the donkey.

a. The neck bones and ribs.

b. The neck bones from the 3 rd to the 7 th and the front part of the 2nd.

a. The first seven spinal bones.

b. Eight ribs.


The skeleton surrounded by the objects.



a. A group of 6 copper needles.

b. Group of 1 ; flint implements.


Body with the objects round.

Jars, dishes, bowls and plates : A, B, C, D, E, F, G, H, I, J, K, L

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a. Alabaster row beads.

b. Hooks and weights for fishing : A, B, C.

a. Group of nine flint implements.

b. Clay model of granary bins surrounded by a wall.



Funerary bark to the south of tomb no. $680 \mathrm{H}_{5}$
-2xyy
 $\mathrm{C}=\mathrm{x}$


a. Ivory model boat ; bent part missing (side view).

b. Ivory model boat (inside view).

a. View of a stone model boat in imitation of papyrus stems.

a. The spouted alabaster jar with stopper beside it.

b. The elegant flint knife.

a. The two slate dishes A and B.

b. The upper part of the ivory label bearing the name of Queen Neit Hotep and her face.

c. The cylinder seal and its inscription.

a. Hair on the skulls (profile).

b. Hair on the skulls (face).


PI. LXVII.


ZAKI Y SAAD




FF 1.


GG: $\longleftrightarrow \mathrm{HH}_{2}$


LL
$\mathrm{LL} 2 . \backsim 1 \ldots$
LL 3.
MM 1



PI. LXXII.




a. Six skulls showing the face.

b. The same skulls in profile.

a. 12 skulls in profile.



b. Same skulls in face.


Nine skulls in profile.

b. The same skulls in face.


The tibia showing cronic periostis.


The femur showing fracture of shaft.


Stones : A, B and C.

PI. LXXXI.


Stones : A and B.

## Monastery of Shahran



Fawzy Ibrahim



际


Section Looking North


Tomb No 1 H. 4

## B+




Section Looking East

Tomb No. 68 H. 4





Tomb No. 407 H. 4



Section Looking North




Tomb No. 505 H. 4


Tomb No. 505 H. 4


Tomb No. 653 H. 4


Section Looking West
$\qquad$ 3 wemo


Tomb No. 25 H. 5


Section Looking West

Tomb No. 68 H. 5

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Tomb No. 150 H:5



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Section Looking East


Tomb No. 680 H. 5



ROYAL EXCAVATIONS AT HELWAN
$\qquad$
Scale 1：200 ${ }_{10}$ －．．

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\text { Season } 1946-1947
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[^0]:    ${ }^{(1)}$ The coloured-plan I is for the fluid season which was published in "The Royal Excavations at Saqqara and Helwan'".

[^1]:    ${ }^{(1)}$ See Abu-Saleh : fol. $4_{7} a$, p. 59 and 60 and ${ }_{1} / 4,1 / 12$, fol. 49 b, p. $1 / 6$.
    (2) Thanks to M. Charles Bachatly who first told me that it might be the Monastry of Shahran.

[^2]:    ${ }^{(1)}$ Compare Exery and Zaki Said, The tomb of Hemaka at Saqqara, p. 18, fig. 5, 1.
    ${ }^{(2)}$ Zaki Sadd, $^{\text {a }}$, The Royal Ercarations at Saqqara
    and Helwan, p. $162,163,164$ and 165 , pl. LXIX and LXX.

[^3]:    (1) Zaki Sand, The Royal Excarations at Saqqara and Helwan, p. 162 and pl. LXVIII.

[^4]:    (1) Driotoy-Vandier, Les peuples de l'Orient Méditerranéen, II, L'Égyple, p. 1/43, 144,

    Earliest Dynasties, 1901, Part II, p. 26, pl. VIII, 12.

[^5]:    (1) Zaki Sat, The Royal Excarations at Saqqara and Helran, p. ${ }^{2} 7$, pl. XIII.

[^6]:    ${ }^{(1)}$ Driotov and Vavier, Les peuples de l'Orient Méditerranéen, II, L'Égypte, p. 136 , $142,143,153,159,163$ and $164 ;$

    Petrae, The Royal Tombs of the Ist Dynasty, pl . VIII $2,3,7$ and $12, \mathrm{pl}$. IX 2,9 and 12 , pl. XII 2 and 5 , pl. XVII.

[^7]:    ${ }^{(1)}$ The palm-tree was considered as a representation for the goddess 'Seshat'. See G. A. Wainwright, Seshat and the Pharaoh (The Journal of Egyptian Archaeology, vol. 26,

[^8]:    ${ }^{(1)}$ Zaxi $^{\text {Sadd }}$, The Royal excavations at Saqqara and Helwan, p. 107 , pl. LXXIX.

[^9]:    ${ }^{(1)} \mathrm{He}$ is now delegated as the assistant of the Excavations.
    ${ }^{(2)}$ For supposed prehistoric and carly historic camel sculpture of Egypt, ScharfF, Die Archäologischen Ergebnisse des Graberfeldes in Abusir-el-Melek,Leipzig 1926, p. 40 ; Mevghis, Weltgeschichte der Steinzeit, Wien 1931 , p. 309;

[^10]:    Moyenne du peuple à Saqqarah, p. 15, pl. XLIX.
    (2) Petrie, Abydos, Part I, $19 \circ 2, \mathrm{pl}$. IX, /, Part II, 1903 , pl. III, 20.

